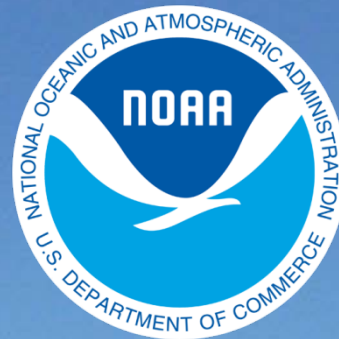


BookletChart™

Lake Erie

NOAA Chart 14820

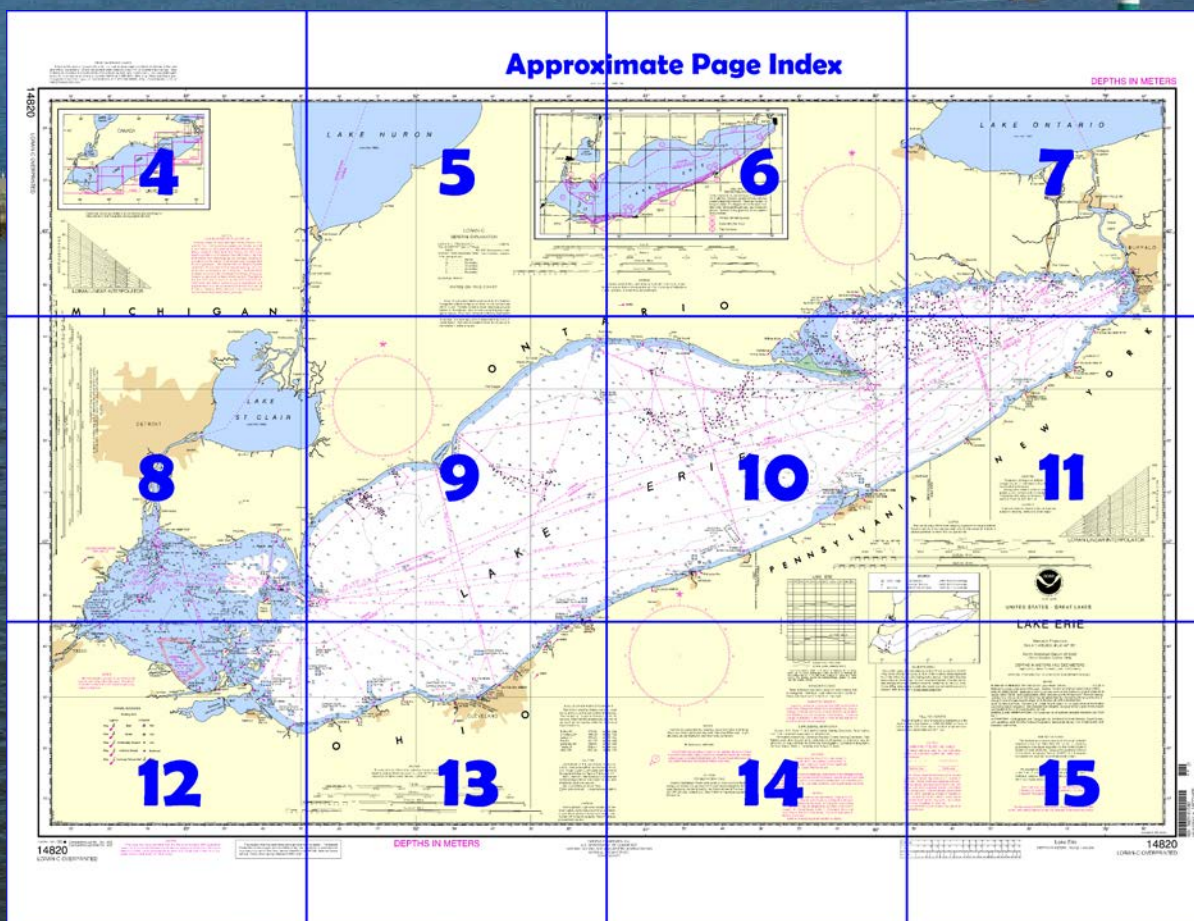


A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA**

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14820>



(Selected Excerpts from Coast Pilot)

Lake Erie is the southeasternmost and fourth largest of the five **Great Lakes**. With a greatest depth of 210 feet, it is the shallowest of the lakes and the only one with a floor above sea level. The deepest part of the lake is generally at the E end, while the island region in the W part of the lake is the shallowest. The lake has an average depth of 62 feet. The lake is fed at the NW end by water from Lake Huron via St. Clair River, Lake St. Clair, and Detroit

River. The only natural outlet of the lake is at the NE end through Niagara River. **Welland Canal** bypasses the falls and rapids of Niagara River and provides a navigable connection to Lake Ontario.

For about 25 miles W from a line between Point Marblehead on the S shore and Point Pelee on the N shore, Lake Erie is rendered foul by a group of islands and shoals. The main route for large vessels is through Pelee Passage in the N part of the area, but other passages of limited capacity are also available to the S. Submerged fish net stakes may be encountered throughout the W end of Lake Erie. The **International boundary** between the United States and Canada extends through this area in a series of straight lines bearing from the E into the NW.is in Canada going back to the head of the St. Lawrence River.

**U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies**

RCC Cleveland	Commander	
	9th CG District	(216) 902-6117
	Cleveland, OH	

Table of Selected Chart Notes

➔ Submerged well head

NOTE B

Mariners should use caution as military craft may be operating within the area. For further information consult the U.S. Coast Guard Local Notice to Mariners.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

LAKE ERIE FISH NETTING AREAS

Various types of net are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by buoys or stakes. This diagram shows the areas most intensively fished and the principal type of nets employed. However, fishing gear may be encountered at any location.

- 1 Principal Gill Netting Areas
- 2 Impounding Net Areas
- 3 Trap Net Areas

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Buffalo, NY	KEB-98	162.55 MHz
Cleveland, OH	KHB-59	162.55 MHz
Detroit, MI	KEC-63	162.55 MHz
Erie, PA	KEC-58	162.40 MHz
Sandusky, OH	KHB-97	162.40 MHz
Toledo, OH	WXL-51	162.55 MHz
Akron, OH	KDO-94	162.40 MHz

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
○ (Accurate location) ◌ (Approximate location)

SYMBOL REFERENCE

Floating Aids

Lighted	Unlighted
Pillar	Nun
Pillar	Can
Pillar	Can
Pillar	Spherical
Pillar	Pillar

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

This chart was developed within the framework of international specifications in cooperation with the Canadian Hydrographic Service.

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

NOTE D

Mariners are warned that the numerous uncharted stakes and fishing structures, some submerged, may exist in the area of this chart. Such structures are not charted unless known to be permanent.

CAUTION

POTABLE WATER INTAKE

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental information.

SOURCE DIAGRAM

Most of the hydrography identified by the letter "I" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Other outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

CAUTION

The natural scale of this chart varies by 3 percent from top to bottom. Graphic scales shown are accurate only for the range of latitude in closest proximity to where they are positioned.

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CAUTION

Gas pipelines and wells contain natural gas under pressure and damage to these installations would create an immediate fire hazard. Vessels anchoring in Lake Erie should do so with caution after noting the underwater, and therefore concealed, positions of all oil and gas wells, pipelines, submerged cables and other installations.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

Vessel Traffic Control calling-in point; arrow indicates direction of vessel movement. Mandatory calling-in points are identified numerically. Voluntary calling-in points are identified alphabetically. For additional information see U.S. Coast Pilot 6 and the Canadian Notice to Mariners.

PLANE OF REFERENCE OF THIS CHART (Low Water Datum).....173.50 m.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles (St M) and nautical miles (NM) between points of departure. The true bearing between any two points on this chart may be determined by connecting the two points with a straight line and measuring the angle of its intersection with a meridian line.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

AUTHORITIES. Hydrography and Topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

LO-RAN-C GENERAL EXPLANATION

LO-RAN-C FREQUENCY.....100KHz
PULSE REPETITION INTERVAL.....99.600 Microseconds
STATION TYPE DESIGNATIONS: (Not individual station letter designations)

M.....Master
W.....Secondary
X.....Secondary
Y.....Secondary
Z.....Secondary

EXAMPLE: 9960-X

RATES ON THIS CHART

9960-W 9960-X 9960-Y 9960-Z

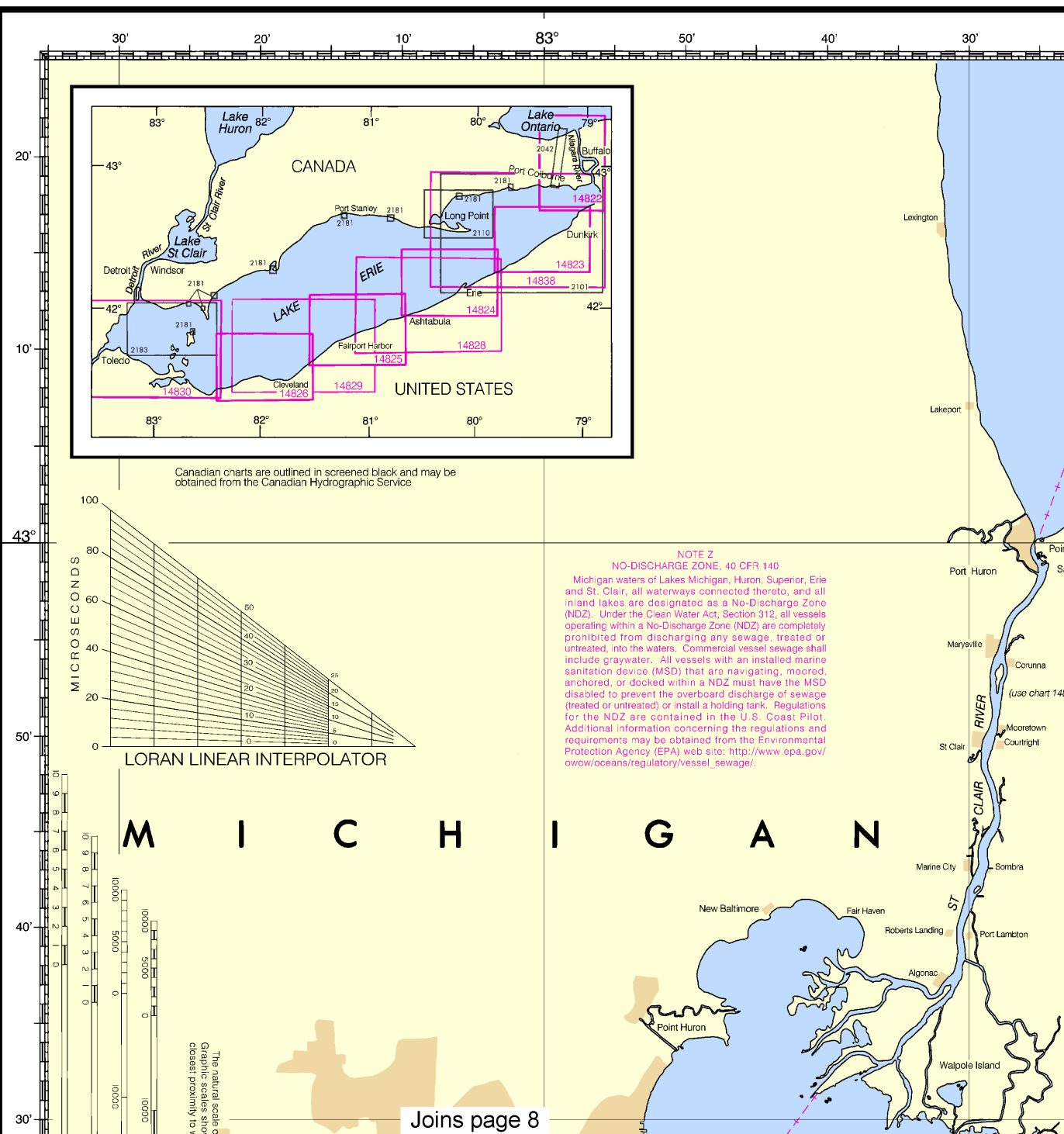
LO-RAN-C correction tables published by the National Geospatial-Intelligence Agency or others should not be used with this chart. The lines of position shown have been adjusted based on the latest available official signal processing data. They have not been corrected to conform with survey data. Every effort has been made to meet the 1/4 nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

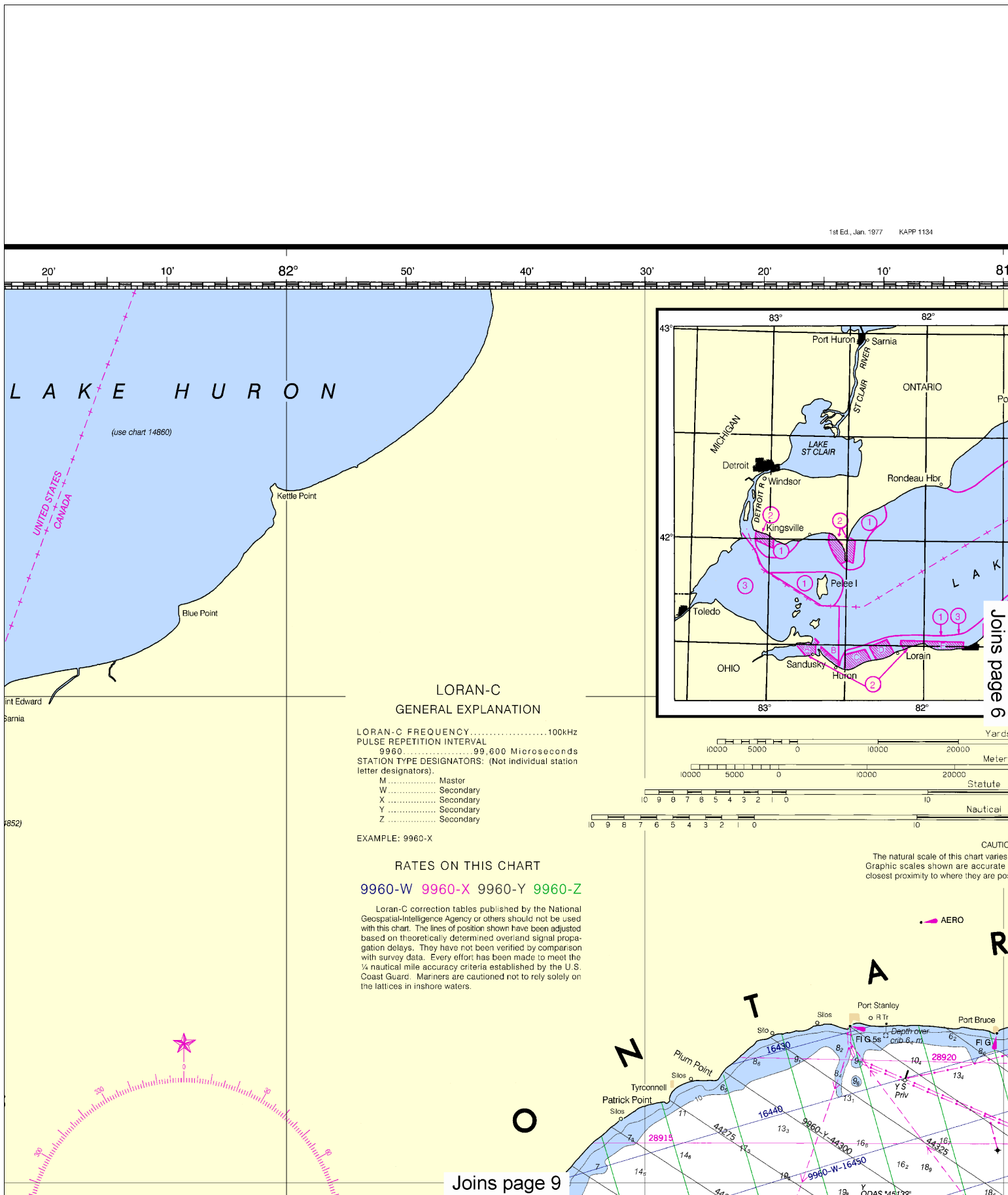
PRINT-ON-DEMAND CHARTS

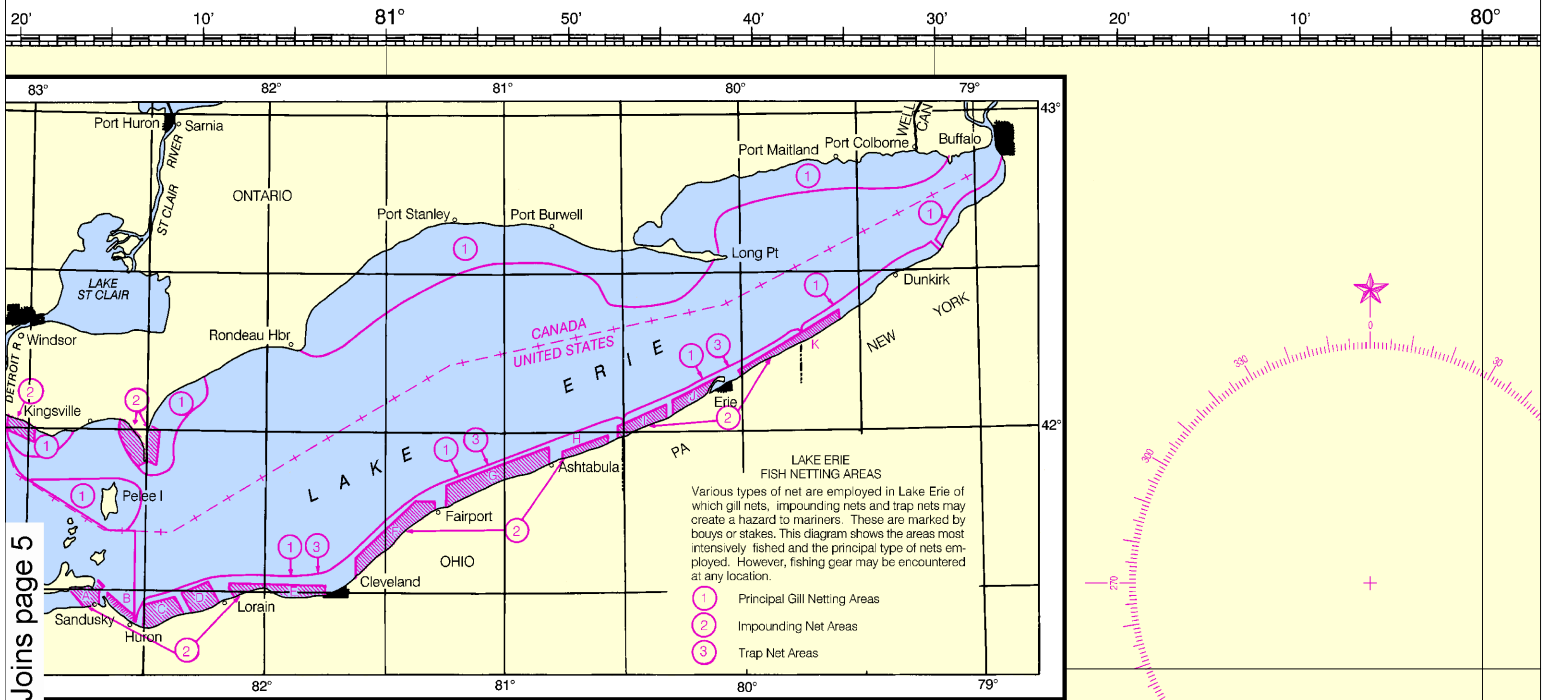
NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

14820

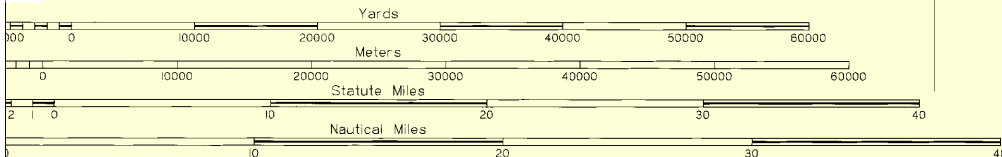
LORAN-C OVERPRINTED



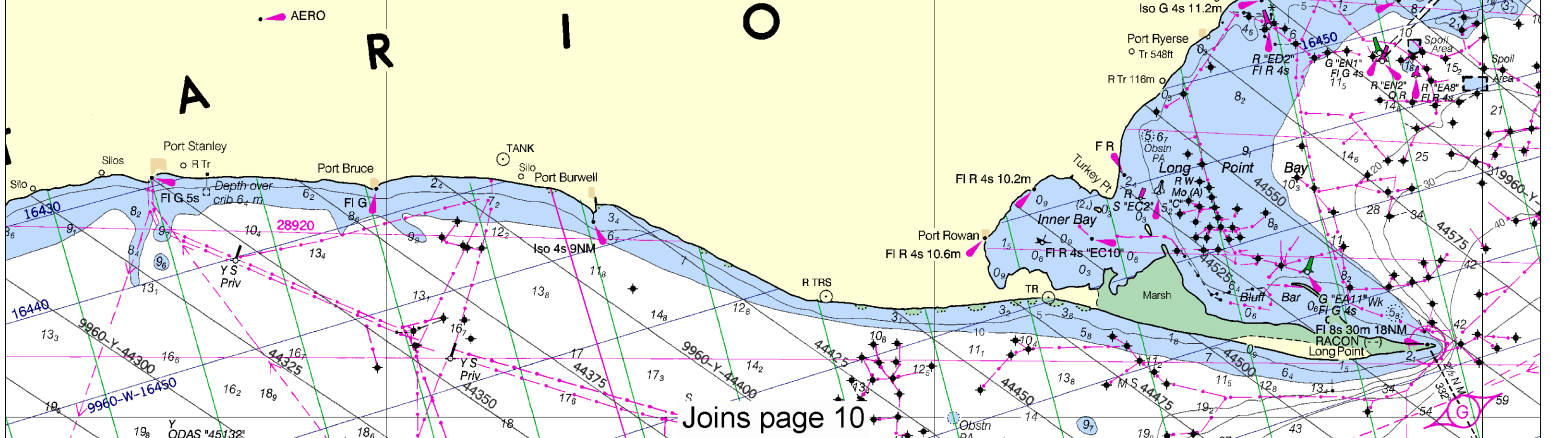




Joins page 5



CAUTION
The natural scale of this chart varies by 3 percent from top to bottom. Graphic scales shown are accurate only for the range of latitude in closest proximity to where they are positioned.



6

Note: Chart grid lines are aligned with true north.

LAKE ONTARIO

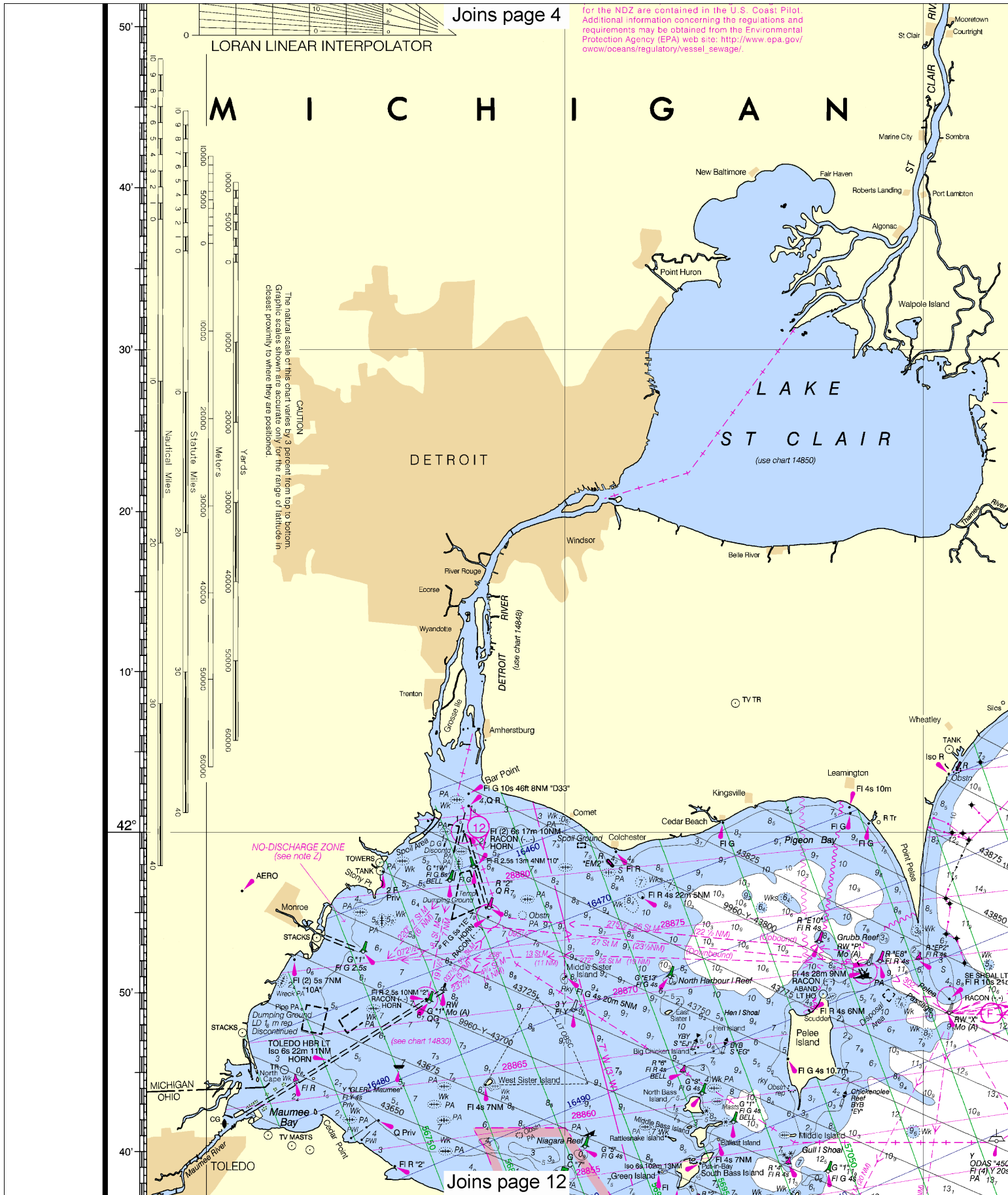
(use chart 14800)

LAKE ONTARIO

(see chart 14822)

Join page 11

7



8

Note: Chart grid lines are aligned with true north.

EXAMPLE: 9960-X

Joins page 5

RATES ON THIS CHART

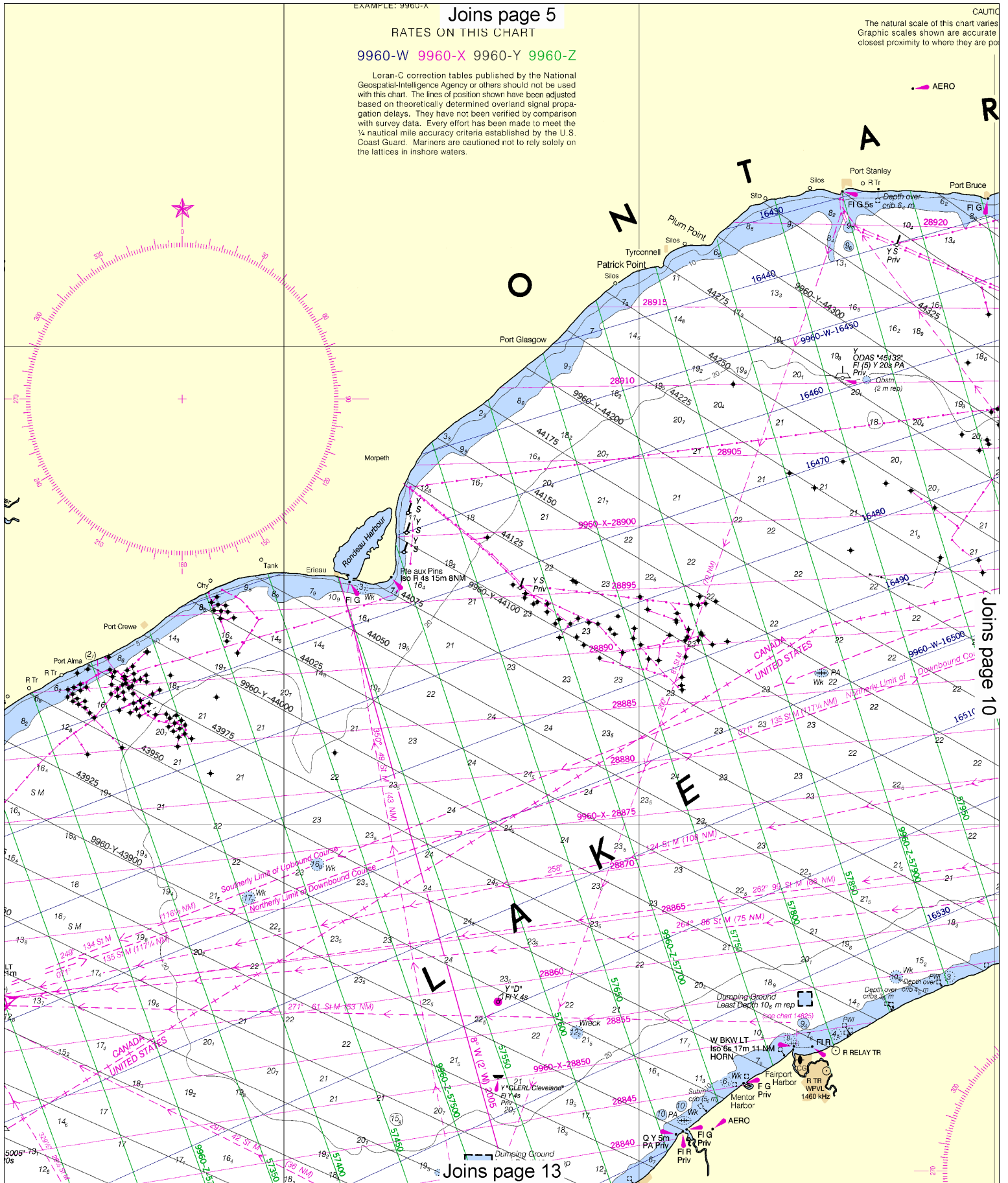
9960-W 9960-X 9960-Y 9960-Z

Loran-C correction tables published by the National Geospatial-Intelligence Agency or others should not be used with this chart. The lines of position shown have been adjusted based on theoretically determined overland signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the 1/4 nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

CAUTION

The natural scale of this chart varies. Graphic scales shown are accurate closest proximity to where they are plotted.

AERO



Joins page 10

Joins page 13

The natural scale of this chart varies by 3 percent from top to bottom. Graphic scales shown are accurate only for the range of latitude in closest proximity to where they are positioned.

 AERO

A

R

1

O

Joins page 9

E

R

Joins page 14

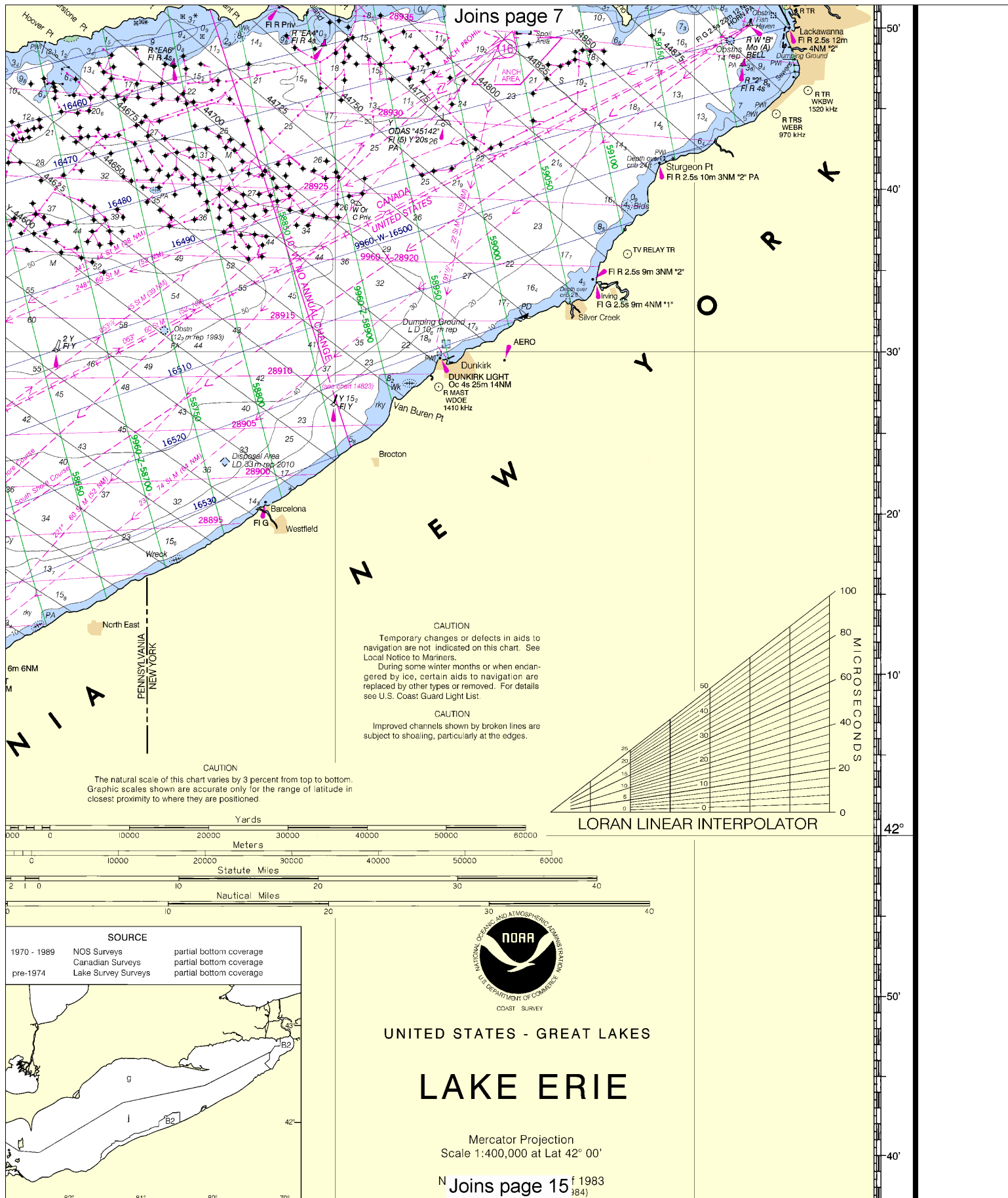
LAKE ERIE

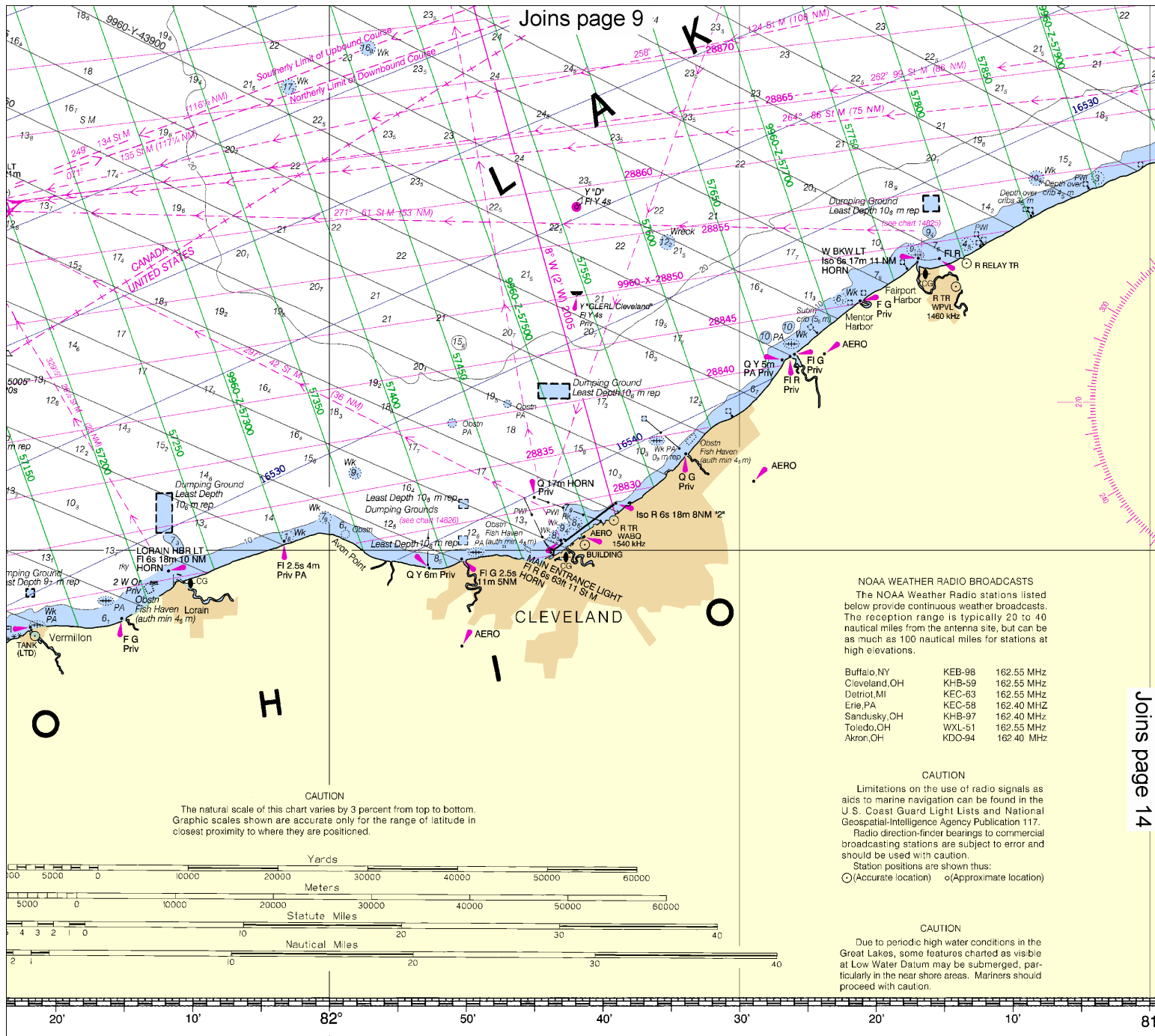
Figure 1 is a line graph showing the elevation of the water surface in meters from January to December. The y-axis is labeled 'Elevation in meters' and ranges from -1 to +2. The x-axis shows the months from JAN to DEC. A horizontal line at 0 meters is labeled 'Low Water Datum'. The water surface elevation starts at approximately +1.3m in January, drops to +1.2m in February, rises to +1.4m in March, and then fluctuates between +1.2m and +1.4m for the rest of the year. A smooth curve is drawn through the data points, peaking at approximately +1.4m in June and July.

B2
g
i

10

Note: Chart grid lines are aligned with true north.

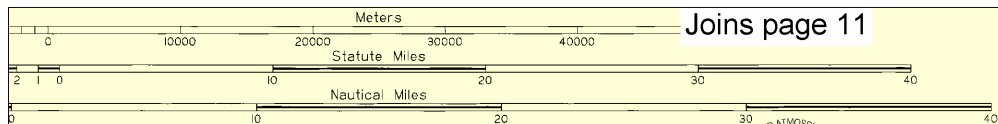




Joins page 14

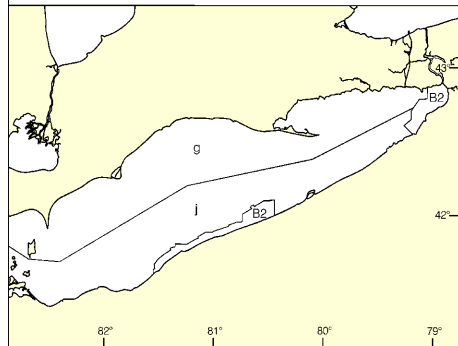
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NATIONAL OCEAN SERVICE
COAST SURVEY

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COAST SURVEY



Joins page 11

SOURCE		
1970 - 1989	NOS Surveys	partial bottom coverage
	Canadian Surveys	partial bottom coverage
pre-1974	Lake Survey Surveys	partial bottom coverage



Most of the hydrography identified by the letter "i" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Other outlined areas represent limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by type and type of survey. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

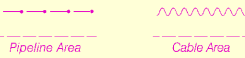
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CAUTION

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Covered wells may be marked by lighted or unlighted buoys.



UNITED STATES - GREAT LAKES

LAKE ERIE

Mercator Projection
Scale 1:400,000 at Lat 42° 00'

North American Datum of 1983
(World Geodetic System 1984)

DEPTHS IN METERS AND DECIMETERS
Depth contour interval 10 meters (Under 10 at 5 meters)

Additional information can be obtained at nauticalcharts.noaa.gov.

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum)..... 173.50 m.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles (St M) and nautical miles (NM) between points of departure. The true bearing between any two points on this chart may be determined by connecting the two points with a straight line and measuring the angle of its intersection with a meridian line.

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SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

AUTHORITIES. Hydrography and Topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

HORIZONTAL DATUM

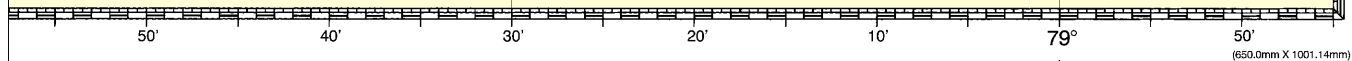
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

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No copyright is claimed by the United States Government under Title 17, U.S.C. However, other nations may claim intellectual property rights on the compilation of data depicting the foreign waters shown on this chart.

This chart was developed within the framework of international specifications in cooperation with the Canadian Hydrographic Service.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.



FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Lake Erie

DEPTHS IN METERS - SCALE 1:400,000

14820

LORAN-C OVERPRINTED



ED NO. 21



NSN 7642014010567
NGA REFERENCE NO. 14XCO14820



VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker